

REACTION TO THE INTRACUTANEOUS ADMINISTRATION OF ANTHRAXIN IN PERSONS
IMMUNIZED AGAINST ANTHRAX

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REACTION TO THE INTRACUTANEOUS ADMINISTRATION OF ANTHRAXIN IN PERSONS
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[Following is the translation of an article by N. N. Dieva, Orlovskaya Oblast Sanitary-Epidemiological Station, published in the Russian-language periodical Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (Journal of Microbiology, Epidemiology and Immunobiology), No 2, 1965, pages 143--144. It was submitted on 23 Mar 1964. Translation performed by Sp/7 Charles T. Ostertag, Jr.]

A study was made of the immuno-allergic changes in workers from a leather-shoe combine and a meat-poultry packing plant who had been inoculated cutaneously with the STI anthrax vaccine. ~~This was carried out in~~ January and April 1963 with the help of the allergic intracutaneous test with chemical (tissue free) anthraxin from the Moldavian Institute of Epidemiology, Microbiology and Hygiene (series No 1, expiration date 21 July 1963). Using a hyperdermic syringe with a thin needle, the anthraxin was administered in doses of 0.1 ml into the inner surface of the forearm. A test-control liquid was administered (with a different syringe) into the skin of the other forearm on 20 men. The results of the reaction were considered after 24 and 48 hours. We were guided in the appraisal by the provisional instructions for the diagnosis of anthrax and the determination of the postinfection and postvaccinal reactivity to it with the help of the allergic intracutaneous test with chemical (tissue free) anthraxin (from 16 Jan 1962). There were 56 men under observation. Of these, one was inoculated 6 years in a row, 19 men - 2 to 5 times, and 36 were inoculated for the first time in 1962. With this, in 50 men the last inoculation was performed in May and July, 1952, in 5 men -- in February and July, 1961, and one man generally speaking was not inoculated.

Following the administration of the anthraxin general manifestations were absent and local ones were expressed in a small infiltration and hyperemia on the spot.

In the calculation of the results of the intracutaneous test after 24 hours, no case was there a sharply positive reaction (hyperemia of more than 41 mm in diameter with an infiltrate), in 21 cases the result of the reaction was positive (hyperemia 16--40 mm in diameter with an infiltrate), in 9 it was weakly positive (hyperemia up to 15 mm in diameter with an infiltrate), in 7 it was doubtful (hyperemia and infiltrate), and in 19 there was no reaction. After 48 hours the infiltrate with hyperemia up to 20--10 mm was preserved in only 7 men. In 4 out of 5 men checked, an immuno-allergic response occurred when the intracutaneous test was set up on the 412--660th day following inoculation.

Thus, the reaction to the intracutaneous administration of anthraxin occurred in only 52% of those inoculated with the STI vaccine on the 171--314th day. In the majority of cases it was attenuated in 30--40 hours; therefore, it is not expedient to consider the results of the reaction after 48 hours.